Communicable Disease UPDATE

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health Vol. 12, No.3 Summer 2004

Quinolone resistant *Neisseria gonorrhoeae* (QRNG) continues to rise in Massachusetts

In 2002, a total of 10 cases of QRNG were identified by the STD Laboratory of the Massachusetts State Laboratory Institute (SLI), representing 2.1% of all SLI gonococcal isolates tested (10/486).

In 2003, a total of 54 cases were identified: 2 cases occurred in women and were associated with travel abroad (Guatemala, Philippines); 4 cases occurred in men who reported having sex only with women (MSW), of whom two were partners of the women with QRNG associated with travel abroad. A total of 48 cases occurred among men who have sex with men (MSM) – including 2 bisexual men – and only four reported travel in the USA or Europe. These cases represented 13.8% of all persons testing positive for gonorrhea (54/391) or 13.5% of all SLI isolates (56/412).

The STD Division further analyzed 2003 data from the state-funded STD clinics, where 28% (15/54) of all cases of QRNG were identified. There are 7 clinics in Massachusetts that provide services to men and use culture to diagnose gonorrhea. All men testing positive for gonorrhea at the STD clinics are interviewed by a disease intervention specialist (DIS). Among the 192 cases of gonorrhea detected in males, 95 were MSM (47%) with 13 QRNG (13.7%); 12 were bisexual men (6%) with 1 QRNG (8.3%); 82 were among MSW (43%) with 1 QRNG (1.2%). There were no data on sexual partners for 3 cases. Although 34 cases of gonorrhea in female were identified in the STD clinics, no QRNG cases were detected.

In the first six months of 2004 a total of 38 cases of QRNG were identified at the SLI, representing 22.4% of all gonococcal isolates tested.

Most cases of STDs are reported from private sector health care providers rather than publicly-funded STD clinics. It is difficult to assess the extent of the problem of QRNG in the private sector because non-culture tests are generally used and most clinicians (nearly 80% per survey of case reports) use ceftriaxone as recommended for the treatment of gonorrhea. The absence of treatment failure therefore does not bring attention to QRNG.

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Strategic National Stockpile (SNS) – An Overview

The Strategic National Stockpile (SNS) is a repository of large amounts of pharmaceutical and medical supplies available for communities to use during an emergency, such as a terrorist event. The program was conceived in 1999 when Congress charged the Department of Health and Human Services (HHS) and the Centers for Disease Control and Prevention (CDC) with the establishment of the National Pharmaceutical Stockpile (NPS). The NPS became the Strategic National Stockpile in March 2003 and is now managed by the Department of Homeland Security (DHS) and the CDC.

The SNS is designed to be flexible in order to respond rapidly to different types of events, and to augment state and local resources during times of terrorist events and other emergencies. The SNS contains multiple large packages of drugs, vaccines, medical supplies, and equipment. These packages are strategically located in various parts of the country in order to ensure rapid delivery. Once a state asks for assistance, supplies are "pushed" or shipped to the area in need. Supplies are delivered in 12 hours or less via a "12-hour Push Package."

The 12-hour Push Package of supplies arrives in specially designed cargo containers to fit in a wide body 747 or 767 jet or on seven 48-foot tractor-trailers. The package weighs about 50 tons and contains large quantities of biological, chemical, and nerve agent antidotes as well as intravenous equipment, airway supplies, ventilators, and pill counters.

The decision to deploy the SNS will involve collaboration of local, state, and federal agencies including public health, emergency management, fire, and public safety. Once the decision is made, the governor or his or her designee can request the SNS directly from the CDC or make the request through the national emergency response system. If the CDC concurs that supplies are needed, they will deploy the SNS.

Once the state has determined what the situation or threat is, the state can then request a second shipment of specific items sent via the Vendor Management Inventory (VMI).

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Inside

Epidemiology

Hepatitis A in Massachusetts – An Update

Since November 2003, the number of reported cases of hepatitis A in Massachusetts is significantly higher than in previous years. Many of the cases have similar characteristics including unemployment, homelessness, injection or other drug use or recent and current incarceration.

From January 1 through June 30, 2004, 403 cases of hepatitis A were reported to the Massachusetts Department of Public Health (MDPH). This compares to 81 cases during the same period in 2003 and 87 cases during this time period in 2002. Initially, Hampden and Suffolk counties had the highest incidence, but the number of cases in Essex, Middlesex, and Worcester counties has been rising steadily.

Several measures are being used to control the spread of infection. Immune globulin (IG) is being given to people who are in close contact with confirmed cases. If given within two weeks of exposure, IG is more than 85% effective in preventing illness.

MDPH has developed posters and hepatitis A vaccine immunization cards to educate higher-risk groups. These materials have been sent to various community outreach groups, homeless shelters, local health departments and correctional facilities. General handwashing educational materials for adults, children and specific for food industry workers are also available.

Most importantly, Hepatitis A vaccine is available to vaccinate as much of the at-risk population as possible. So far in 2004, over 4000 doses have been sent to local health departments, correctional facilities and community organizations that help the homeless and drug users. MDPH has another 10,000 doses of hepatitis A vaccine available for distribution.

In addition to targeting at-risk populations, control efforts are being directed at preventing foodborne outbreaks. When commercial food handlers become infected with hepatitis A virus, they can contaminate the food if they work while symptomatic, do not have good hygiene, and handle ready-to-eat foods with their bare hands. If MDPH and the local health department determine that it is possible that a food worker contaminated food, IG may be offered to customers at a public clinic. So far this year, IG clinics have been held in Ludlow, Stoneham, twice in Boston and twice in Arlington.

On July 13th, a meeting was held at the Massachusetts Emergency Management Agency headquarters in Framingham. The meeting was attended by representatives from local health departments, correctional facilities, the Massachusetts Restaurant Association and service organizations for the homeless, drug users and those living with existing liver disease. The purpose of the summit was to share information about the current hepatitis A situation and to strategize about ways to get vaccine to the at-risk population.

The current situation in Massachusetts presents a challenge because the population at higher risk is potentially large, spread out and difficult to reach. Controlling the outbreak will require a sustained effort by many public health and outreach workers collaborating with community partners. A designated website is currently being developed. Educational materials are available by calling the MDPH at 617-983-6800. For questions on vaccine availability, please call the MDPH Vaccine Unit at 617-983-6828.

SNS Overview

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The VMI involves major pharmaceutical companies that have agreed to store specific material until it is ready to be shipped. In cases of a known threat, the VMI can be deployed directly instead of the Push Package.

Once the SNS has been deployed, a CDC crew of five to eight people known as the Technical Advisory Response Unit (TARU) will arrive with the first shipment to provide technical expertise and to assist state and local officials. The TARU's role is that of adviser to local authorities to help coordinate the receiving and distribution of the shipment. The team consists of a TARU leader, pharmacist, a logistician to oversee the SNS, a liaison to state and local officials in emergency operations, a U.S. marshal to provide security for the SNS and personnel, and other staff with public health experience.

The Massachusetts Department of Public Health (MDPH) has developed a guidance document, which is close to completion, for planning and implementing community-based emergency vaccination/medication for Emergency Dispensing Sites (EDS). Larger cities may opt to develop their own individual plans and smaller communities are encouraged to work with surrounding towns or on a regional basis. Robert Paone, Statewide SNS Coordinator and Michael Mozzer, Assistant State SNS Coordinator are currently working on completing the guidance document and coordinating education and training efforts. The MDPH will be available to provide technical assistance to communities. For more information, contact Michael Mozzer at 413-586-7525, ext. 1151. Mr. Mozzer may also be contacted by e-mail at Michael.Mozzer@state.ma.us.

Pediarix™ (DTaP-HepB-IPV) Combination Vaccine Is Now Available

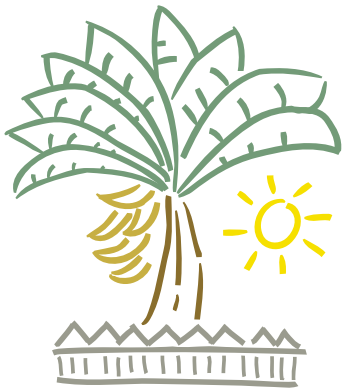
The MDPH Immunization Program announced the availability of Pediarix™ (DTaP-HepB-IPV) vaccine beginning in July 2004. Each dose of Pediarix™ contains diphtheria, tetanus and acellular pertussis (DTaP), hepatitis B (Hep B) and inactivated polio (IPV) vaccines. It has the potential to reduce, by up to 5, the number of vaccine injections a child may receive by the age of 2. DTaP-HepB-IPV is licensed for use in children 6 weeks through 6 years of age. Providers have the option of using DTaP-HepB-IPV for some or all of the primary series or administering the individual component vaccines.

DTaP-HepB-IPV is approved for the primary series of the DTaP, Hep B and IPV routinely given at 2, 4 and 6 months of age. The recommended interval between doses is 6 to 8 weeks (preferably 8 weeks). It is not approved for the 4th or 5th dose of the DTaP series or the 4th dose of the IPV series.

MDPH and the national advisory bodies recommend that all infants should continue to receive the first dose of hepatitis B vaccine at birth, even when an infant might receive DTaP-HepB-IPV for all three doses of the primary series. Although this will result in a 4th dose of Hep B vaccine, data show this to be safe and it is considered acceptable.

Except for fever, the rates of most solicited local and systemic adverse events following DTaP-HepB-IPV are comparable to rates observed following the separate administration of the component vaccines. In an ongoing study, infants who received the 1st dose of DTaP-HepB-IPV with Hib and PCV7 had higher rates of fever < 103.1^0 and medically attended events. However, there was no significant difference in the number children with fever >103.1^0 F. Most of these fevers resolved within a few days.

For more detailed information, refer to the *Pediarix™ (DTaP-HepB-IPV) Combination Vaccine Clinical Advisory, July 2004* available at: http://www.mass.gov/dph/cdc/epii/imm/imm.htm#alerts or call 617-983-6800.

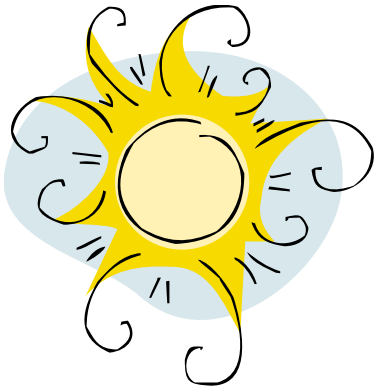


Update: Varicella Case-Based Reporting System

The Massachusetts Department of Public Health (MDPH) has implemented a case-based reporting system for varicella (chickenpox) which replaced the aggregate reporting system in July 2004. Health care providers and school nurses are now being asked to use a one page form to report cases on a monthly basis to the local board of health. This change is in line with national recommendations of the Centers for Disease Control and Prevention (CDC) for individual varicella case reporting by 2005. The expectations of this new system in the first few years are that it will allow capacity to:

- monitor overall trends of varicella disease;
- monitor the impact of varicella immunization on disease incidence, morbidity, and mortality; and
- measure vaccine effectiveness.

CDC estimates that Massachusetts has approximately 10,000 cases of varicella each year. Therefore, it will not be feasible in the first few years to investigate each report. However, cases of special significance and high-risk situations should continue to be reported immediately by telephone to both the local board of health and MDPH.



Expanded Vaccine Availability for Adults

The MDPH Immunization Program is again providing vaccine for adults. Hepatitis A, hepatitis B, IPV, MMR, and varicella vaccines are now available for high-risk patients at public provider sites (i.e. local boards of health, community health centers). In addition, private provider sites can receive hepatitis B and MMR vaccines for adults requiring these vaccines for college entry (only). Pneumococcal polysaccharide vaccine (PPV23) is also available for high-risk adults at both public and private provider sites. MDPH will continue to supply Td vaccine for all providers and influenza vaccine for adults in high-risk groups at both public and private provider sites on a limited basis. For more information call the Vaccine Management Unit at 617-983-6828.

Investigating a Human Case of West Nile Virus Infection

In mid-August the Virus Serology Lab at the State Laboratory Institute contacted the Division of Epidemiology and Immunization to report that a special fluid specimen submitted for West Nile virus (WNV) testing tested positive and the result has been confirmed. The person from whom the specimen was obtained lives in a town where both a positive bird and mosquito pool have been reported. The town has never had a WNV positive human case before, but surrounding towns have had cases in the past. What actions need to be taken?

Follow-up of WNV human cases is time-sensitive since the identification of a human case is a sentinel event, with ramifications for immediate risk assessment of local communities. In addition, identification of a human case that received or donated blood products in the month prior to onset will require immediate measures and follow-up.

An epidemiologist from the Division will immediately retrieve case history information from the laboratory and contact the physician who ordered the WNV test. The physician will be asked to provide information necessary to complete a WNV Case Report Form. Critical information includes:

- **Patient demographics including occupation:** If the case is a laboratory worker, the epidemiologist would need to determine if they worked with materials potentially infected with WNV.
- **Symptom description and onset date:** It is particularly important to note if the case has meningitis, encephalitis, meningoencephalitis or acute flaccid paralysis. WNV cases are categorized as West Nile encephalitis or West Nile fever. West Nile fever cases are less severe than West Nile encephalitis and they usually do not require hospitalization.
- **Specimen collection date(s):** Acute serum and cerebrospinal fluid specimens should be drawn within the first 14 days following symptom onset. (Onset date is important for interpreting test results.) Convalescent serum specimens should be obtained 10-14 days after the acute specimens were collected. Most individuals will have developed an IgM response in serum approximately 8 days post-onset and an IgG response 3 weeks post-onset. Convalescent serum specimens are sometimes needed to confirm the diagnosis.
- **A complete travel history for the thirty days prior to onset including locations and exact dates:** This information is vital to assess a local community's risk of further cases, or to determine if the illness was acquired out of state or out of country.
- **Case's history of ever having had an arboviral disease (yellow fever, powassen, or dengue) or ever having been vaccinated against an arboviral disease (yellow fever or Japanese encephalitis):** Persons with previous illness or vaccination due to these viruses may have elevated antibody levels that may cross-react and result in false positive WNV results.
- **Case's history of either receiving or donating blood, organs or tissues in the thirty days prior to onset:** In 2003, despite the implementation of blood-donor screening for WNV, six transfusion-associated WNV cases were identified in the United States. While none of these six transfusion-associated cases was identified in Massachusetts, a positive blood donor was identified through the newly implemented screening process. If a case does have a recent history of either receiving or donating blood, tissues or organs, the Massachusetts Department of Public Health (MDPH) will follow up with the appropriate health care facility/facilities and blood collection agencies to warn of possible blood product contamination or locate the infected donor or the contaminated products.

Once this information is retrieved from the physician, the epidemiologist will relay the details to the local board of health of the town in which the case resides. They will review what educational materials are available and may e-mail or fax a sample press release for local board of health use. Depending on the situation, MDPH may issue a statewide press release. The epidemiologist will also suggest information that can be posted on a community's official website.

It is important that information on prevention strategies is disseminated throughout the community at this time, particularly to elderly populations who are at highest risk of severe WNV complications. Prevention strategies include:

- Avoiding outdoor activities between dusk and dawn, if possible, as this is the time of greatest mosquito activity.
- Wearing a long-sleeved shirt and long pants when mosquitoes are active.
- Using a mosquito repellent that contains DEET (the chemical N-N-diethyl-meta-toluamide). Use the lowest concentration of DEET which provides protection for the length of time you will be exposed to mosquitoes. For example, products with concentrations of 10% are effective for about 2 hours. Products with concentrations of 25% are effective for about 5 hours. The efficacy of DEET plateaus at a concentration of 30% which is the maximum concentration recommended for adults. The maximum concentration of DEET recommended for use on children is 15%. DEET products should not be used on infants. Skin should be washed after returning indoors.
- Fixing any damaged screens and ensuring they are tightly attached to doors and windows.
- Reducing mosquito populations by getting rid of

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HIV/AIDS Surveillance

Integration of Pediatric and Adolescent/Adult HIV Surveillance Systems in Massachusetts

Since the early 1980s, AIDS has been reportable to the Massachusetts Department of Public Health (MDPH). It is reportable, by name, regardless of the person's age. In the late 1980s, Massachusetts received federal funding for the Pediatric Spectrum of HIV Disease (PSD) project. Through this project, information was collected on children born to HIV positive mothers or receiving care at five sentinel sites throughout the state. The children followed by PSD included children who were HIV exposed and those who were HIV infected. Children born to HIV infected mothers who were not infected were followed, initially for the long term, but recently until infection is ruled out.

This surveillance system was not truly population based, but approached being population-based because surveys revealed that 95% or more of HIV exposed and infected children were seen at least once at a study site. These sites included Boston Medical Center, The Children's Hospital, University of Massachusetts Medical Center, Baystate Medical Center, and Cambridge Hospital, with New England Medical Center and Massachusetts General Hospital also collecting data. Nearly all children in Massachusetts born to HIV-infected mothers were either born at one of the five medical centers or were referred for care or consultation to one of these centers after they were born.

The HIV/AIDS Surveillance Program (HASP) and PSD have a long history of collaboration. PSD and HASP staff were co-located at the State Laboratory Institute in Boston. Over the years, PSD staff would regularly update the HIV/AIDS Reporting System (HARS, the surveillance database maintained by the HASP) with information on children living or diagnosed with AIDS in Massachusetts. Every time the HASP received an AIDS case report for a child, PSD would be contacted to verify whether or not that child had been enrolled in the PSD study. Both HASP and PSD program staff and databases are held to rigorous standards of security and confidentiality and PSD did not obtain or collect personally identifiable information. The PSD project effectively served as a population-based pediatric HIV surveillance system for Massachusetts and provided surveillance information on HIV-exposed as well as infected children.

Whereas AIDS has been reportable to the Department of Public Health since 1983, HIV infection without an AIDS diagnosis has only been reportable since January 1, 1999. Unlike AIDS, HIV infection is not reportable by name, but by a coded identifier (sometimes referred to as a "unique identifier" or UI). After the initiation of HIV infection reporting in Massachusetts, the Department of Public Health never pursued the report of pediatric HIV infection from providers because of the well-established surveillance system maintained by PSD. Funding for PSD will conclude this fall. Thus, it has become necessary for the HASP to assume the role of HIV infection surveillance for the pediatric population in Massachusetts.

The HASP is in the process of developing an integrated mechanism for the report of children with HIV infection and AIDS. HASP staff have abstracted all the information necessary for the completion of an HIV case report for all the children in PSD who are confirmed HIV-infected, but who have not developed AIDS (no information on HIV-exposed only children has been abstracted). Discussion has been initiated for prospective reporting (incident cases) of all newly identified HIV-infected (not AIDS) children and prospective reporting of all children in care who progress to AIDS (reporting by name) and all children new to care diagnosed with AIDS (reporting by name) directly to the HASP.

The existing Adult/Adolescent HIV Surveillance database will be modified to enable the entry and storage of pediatric HIV infection variables. With the inclusion of the pediatric HIV infection data from PSD, Adult/Adolescent and Pediatric HIV/AIDS Surveillance will then be fully integrated and operational. Further expansion of a reporting network of providers of care for children diagnosed with and living with HIV infection will be promoted through a series of regional surveillance and reporting workshops for all HIV/AIDS care providers statewide during the fall of this year.

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standing water around the home. Mosquitoes will begin to breed in any puddle or water that stands for more than four days. Water may collect in recycling containers, ceramic pots, plastic wading pools, old tires, or clogged roof gutters.

The epidemiologist will ask the local board of health to contact its local mosquito control district to discuss vector control strategies. If the city or town is not currently participating in a mosquito control district and would like more information, it will be directed to contact the Department of Agricultural Resources, State Reclamation and Mosquito Control Board at 617-626-1700.

The MDPH encourages local boards of health to access the arbovirus website at www.mass.gov/dph/wnv/wnv1.htm. During the mosquito season, surveillance information on birds, mosquitoes, horses and humans is updated on a daily basis. The website also contains educational materials for the general public, physicians, boards of health and veterinarians.

QRNG

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Massachusetts Department of Public Health has recommended the use of 250 mg of ceftriaxone as the preferred treatment for gonorrhea since 1987 because it is effective at all anatomical sites and is safe to use during pregnancy and in adolescents. For practical reasons (dose packaging) and concern over the development of antibiotic resistance, the 250 mg dose continues to be recommended.

In 2002, a clinical advisory was sent to clinicians informing them of the emergence of QRNG and was posted on the Department of Public Health web site. The advisory:

- reiterated the STD Division recommendation for the use of ceftriaxone
- informed that the use of quinolones was no longer recommended for the presumptive treatment of gonorrhea or treatment based on a non-culture test result.

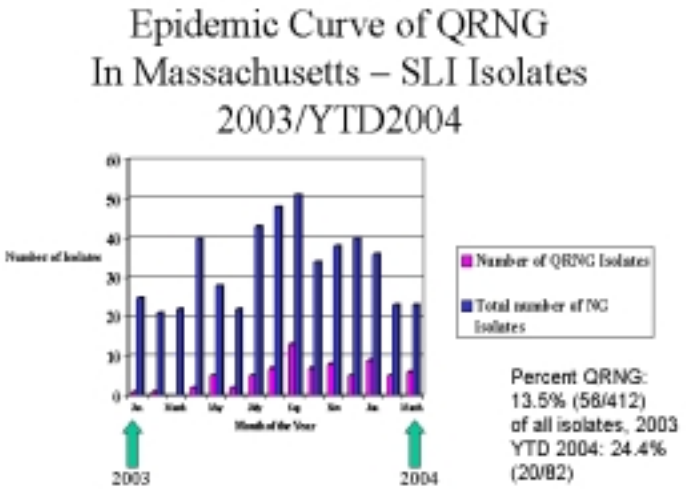
In the spring of 2003, with an increasing number of cases of QRNG, the STD Division began sending letters to all providers reporting gonorrhea treated with quinolones asking them to perform a test of cure if resistance had not been ruled out with susceptibility testing. It also reiterated the recommendation to use ceftriaxone. Reporting cards were changed to reflect recommendations and collect information on the use of cultures.

The rationale to recommend against the use of quinolones for all cases of gonorrhea (presumptive and based on non-culture tests), rather than only for those among MSM, is the following:

- Ceftriaxone has always been recommended to treat gonorrhea
- Sexual history-taking to assess the gender of sexual partners may not always be performed or patients may not volunteer the information
- Men reporting sex with women only and without travel abroad were identified with QRNG
- There are no data about the extent of QRNG among the heterosexual population
- The risk for upper genital tract infections in women exists with inadequately treated cervical infections
- The spread of QRNG is highly likely

The Massachusetts STD treatment recommendations and advisories are posted on the MDPH web site. Resistance to cephalosporins has not been reported to date. However, any time you treat someone for gonorrhea and symptoms do not resolve, be sure to order a culture on the clinical specimen so that antibiotic susceptibility testing can be performed. Test of cures should be performed on all QRNG cases. The STD Laboratory of the Massachusetts Department of Public Health will provide technical guidance and testing services. You can contact the STD Laboratory at 617-983-6600.

Clinical consultation, practice guidelines and epidemiological services are available through the STD Division. Please call for any assistance at (617) 983-6940.



Comprehensive Syphilis Elimination Plan for Massachusetts

The Massachusetts Division of STD Prevention (the Division) has developed a comprehensive syphilis elimination plan for 2004. The plan outlines the Division's strategy in a matrix that describes key interventions, community and statewide projects and collaborative work with partner organizations. Below is a description of one of the major projects, the syphilis media awareness campaign.

In an effort to decrease the number of new syphilis cases among men who have sex with men (MSM), the Division and the Boston Public Health Commission (BPHC) have developed a syphilis awareness media campaign for MSM at risk. The campaign includes:

- A website, www.gettestedboston.org, with questions and answers about syphilis, links to STD clinics in Massachusetts and information about local screening programs.
- Print and web advertisements for gay community media (Bay Windows, In Newsweekly) and an online business (Manhunt.net).
- Palm cards, bathroom posters and bar coasters for MSM venues promoting syphilis awareness, local screening efforts, or www.gettestedboston.org.

For more information on the Division's comprehensive syphilis elimination plan, please contact David Novak, Syphilis Elimination Coordinator, at (617) 983-6956 (david.novak@state.ma.us)

Refugee and Immigrant Health

Viral Rash Illness In Refugee Populations

Refugee camps are often ideal environments for the spread of infectious diseases. Typically, large numbers of people from different geographic areas congregate in an often small space where the sanitation is poor. In addition, increased numbers in the population may be susceptible to vaccine-preventable diseases due to lack of immunization, malnutrition or immunosuppression (e.g. HIV infection). Examples from the recent resettlement in the U.S. of refugees illustrate four infectious diseases characterized by fever and rashes in refugee camps and populations.

In mid-2003, approximately 8,000 at-risk Liberian refugees in Ivory Coast were prioritized for resettlement in the U.S. Most had fled Liberia years earlier and were dispersed in camps and in non-camp settings. The experiences with febrile rash illnesses that began in October 2003 and the public health responses to disease control are informative.

In October 2003, a case of suspected varicella (chickenpox) was initially identified in a Liberian refugee scheduled for departure to the U.S. Additional suspect cases were identified among the refugees in Ivory Coast and laboratory-confirmed cases of varicella among recently arrived Liberian refugees were reported in the U.S. In response to the varicella outbreak, the Centers for Disease Control and Prevention (CDC) recommended: 1) enhanced daily surveillance for fever and rash illnesses among refugees in transit centers by the International Organization for Migration (IOM); 2) isolation of presumed varicella cases and their contacts; 3) restriction of movement of refugees between affected and unaffected transit centers; and 4) suspension of further movement of the potentially exposed refugees to the U.S. until 3 weeks after the last reported case in transit centers with reported varicella cases. No new cases of varicella were reported until January-February 2004, when numerous cases were reported, with ages ranging from 4 months to 46 years.

Because of continued reports of varicella among all age groups, CDC recommended a vaccination campaign to protect susceptible refugees from varicella, to prevent further transmission, and to facilitate timely refugee movement to the U.S. A team from CDC worked with IOM, the United Nations High Commissioner for Refugees (UNHCR) and the Ivory Coast Ministry of Health to implement the varicella vaccination program. In February 2004, all susceptible refugees 12 months and older without contraindications began receiving varicella vaccine. Refugees <13 years of age received one dose of the vaccine. Refugees >13 years of age were allowed to travel if they received at least one dose of the vaccine. In transit centers with reported varicella cases, vaccinated refugees were allowed to travel after vaccination once 21 days had elapsed after the last reported case of varicella had crusted all lesions.

Also in October-November 2003, cases of children and adults with a measles-like rash and fever were reported in refugee camps and transit centers. In response, children ages 6 months to 14 years in all camps and transit centers were vaccinated with measles-only vaccine. Adult vaccination was also initiated in camps and transit centers with reported measles cases. Laboratory testing performed at CDC showed that this outbreak was due to O'nyong-nyong fever rather than measles. Since measles vaccine supply in Ivory Coast was limited, after November 2003, the Ministry of Health continued with measles vaccination only for children 9 months to 5 years of age, which is the routine World Health Organization recommendation. However, in January 2004, new reports of fever and rash illness were received; laboratory testing confirmed that these cases were due to measles. All the cases were in children 7 months to 12 years of age. Because of continuing reports of measles among children older than 5 years of age, additional measles vaccine was sent to Ivory Coast, and measles vaccination re-expanded to children aged 6 months to 14 years.

O'nyong-nyong is an infection caused by an alphavirus and transmitted by the bite of mosquitos, most commonly *Anopheles* mosquitoes found in tropical and subtropical regions. Joint pain is the most notable symptom. Rash may occur with initial symptoms (unlike measles) or appear after several days. The disease is generally self-limited, and most individuals recover within 2 weeks, although occasionally, joint pain may continue. There is no treatment for the infection.

Finally, in March 2004, laboratory-confirmed cases of rubella were identified among the Liberian refugees. Because rubella can cause serious congenital abnormalities, miscarriage, and fetal death, pregnant women who might have been exposed to cases were identified and tested to determine previous immunity to rubella. In addition, a vaccination campaign to control and prevent further rubella transmission was started in April 2004. Refugees 6 months and older in transit centers with rubella cases received the measles-mumps-rubella (MMR) vaccine. Refugees with any contraindication to the vaccine, such as pregnancy, immunosuppression, vaccination with a live-virus vaccine within the previous 28 days, and severe illness (e.g., malaria, active untreated TB or other infection with high fever) did not receive the vaccine. All refugees in transit centers with reported rubella cases, including those who did not receive the MMR vaccine because of contraindications, were allowed to travel once 14 days had elapsed after the vaccination campaign.

Clinicians in the U.S. who care for refugees may be unfamiliar with the clinical appearance of once-common illness, such as measles and rubella. Chickenpox, however, may be more familiar to clinicians. Most cases of measles in the U.S. are now seen among recent arrivals from travel or immigration from overseas, and congenital rubella syndrome is seen mainly

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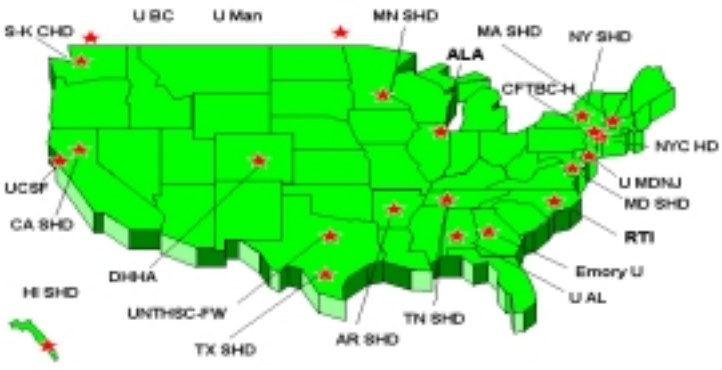
Tuberculosis Epidemiological Studies Consortium

In 2001, the Center for Disease Control and Prevention (CDC) funded the Tuberculosis Epidemiological Studies Consortium (TBESC). The TBESC consists of 22 individual member-sites that conduct programmatically relevant epidemiologic, behavioral, economic, laboratory, and operational research concerning the identification, diagnosis, prevention, and control of active TB disease and latent TB infection.

Members of the TBESC include: The American Lung Association of Metropolitan Chicago, Research Triangle Institute, Arkansas Department of Health , Seattle-King County Department of Public Health, California Department of Health and Human Services, Tennessee Department of Health, Charles P. Felton National TB Center at Harlem Hospita, Texas Department of Health, Denver Health and Hospitals Authority, University of Medicine and Dentistry, New Jersey, Emory University, University of Alabama, Birmingham , Hawaii Department of Health, University of British Columbia, Maryland Department of Health and Mental Hygiene, University of California, San Francisco, ***Massachusetts Department of Public Health,*** University of Manitoba, Minnesota Department of Health, University of North Texas Health Sciences Ctr, New York City Department of Health and Mental Health and New York State Department - Health Research, Inc.

Each of the 22 member-sites has a formal linkage between a health department and an academic institution. Research concepts developed through the consortium are investigator driven; an empowering environment that fosters peer intellectual contribution, and all research is reviewed and monitored. The 20 United States (US) TBESC consortium members are in states that reported the majority of TB cases (55%-60%) in the US. The representative quantity and diversity of TB patients in the TBESC states ensure that the results of research studies can be generalized to non-TBESC involved areas of the US. The results can help TB programs improve their TB prevention and control efforts. In the past three years, 14 studies have been implemented by the TBESC. Massachusetts Department of Public Health, Division of TB Prevention and Control, along with our academic partner, Boston University-School of Public Health, is participating in 3 of the 14 studies. The first study examines the molecular genotyping of multi-drug resistant TB cases, the second study investigates missed opportunities for TB prevention among non-US born TB cases and the third study examines risk factors for acceptance of, adherence to and toxicity from treatment for latent TB infection. All three studies are currently in the formative stage.

Tuberculosis Epidemiologic Studies Consortium Sites



Nurse Highlight

This issue of Communicable Disease Update will highlight Public Health Nurse Lisa Ball, RN, of the Springfield Health Department. Lisa has been the Tuberculosis Nurse for the city of Springfield for 5 ½ years. Her primary responsibility is TB prevention and control, but she also assists the general communicable disease control nurse when needed. Lisa's work in TB brings her in contact with many different settings. She works closely with the state-supported TB clinic at BayState Medical Center, attends case review meetings at BayState and collaborates with social service agencies to address the myriad needs of her TB patients. She administers many aspects of TB case management, such as performing Directly Observed Therapy, and working closely with Outreach Educators. Recently, Lisa and the health department agreed to partner with the Contact Intervention Project, a research project aimed at improving the follow-up of contacts to active TB cases. As a result, she has developed a close relationship with the migrant farm labor population, which travels into the Springfield area on a seasonal basis. In addition, Lisa's involvement with the New England Farm Workers Council has led her to expand her contacts within the migrant population and she has become known as a trusted and knowledgeable source of health information and education for this under-served group. Recently she collaborated with the New American Project and Jewish Family Services, two organizations that work closely with new arrivals from Somalia. Her assistance has aided these new arrivals through health education and follow-up.

Along with her many professional responsibilities at work, Lisa is actively involved in teaching CPR for the American Red Cross, and she was a participant in the Relay-For-Life, a grueling 24-hour marathon which raises money for the American Cancer Society. The personal side of Lisa encompasses her love for painting, arts and crafts hobbies. She likes to garden, growing lots of flowers and raising tomato plants "as tall as myself". Lisa enjoys life with her husband and their beloved dog, Angus, a Shar-Pei/Cocker Spaniel mix.

The TB Division is pleased to recognize Lisa Ball for her dedication and commitment to public health. The Springfield Health Department is fortunate to have her on their team.

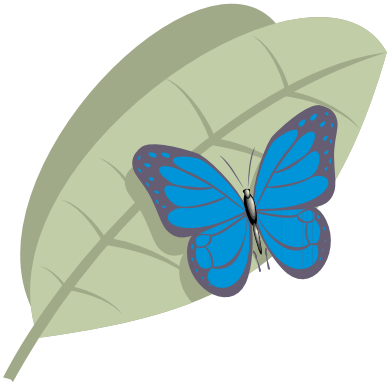
Save the Dates

4th Annual Training on Infectious Disease Surveillance, Reporting & Control: What Is It All About?
Target audience: New local health department personnel and anyone responsible for communicable disease reporting. Persons who have attended this training in the past are welcome to attend again. All trainings run from 8:30 AM to 4:00 PM. Contact Ruth-Ellen Sandler at (800) 214-6021, pin #00 or by email: resandler@mhoa.com

Training dates and locations:

September 22: Springfield
September 29: Wellesley
April 6, 2005: Tyngsborough
April 13, 2005: West Bridgewater

9th Annual Massachusetts Immunization Skills Building Conference - Ocotber 7, 2004 at the Royal Plaza and Trade Center, Marlborough, MA, 9:00 Am to 4:00 PM. A one-day conference to provide up to date informaion on the fast changing field of immunization with a special emphasis on implications in Massachusetts. For more information, contact the Massachusetts Department of Public Health, Immunization Program at (617) 983-6800.



Rash Illness

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among infants of non-immune immigrant women. Cases of such illnesses may at times occur in refugees resettled in the U.S., and clinicians must be aware of the potential for these diseases and their management. Lastly, clinicians must ensure that both adult and child refugees are immune to all vaccine-preventable disease and up-to-date with all vaccines for adults and children per guidelines of the CDC Advisory Committee on Immunization Practices (ACIP).

Isolation and Quarantine Information Now Consolidated on Website

The Massachusetts Department of Public Health (MDPH) consolidated all infectious disease reporting and isolation & quarantine-related documents onto one web page in an effort to improve access to information. Links to the pertinent Massachusetts General Laws (MGL) and Code of Massachusetts Regulations (CMR) that govern reporting and control are more easily accessible, including links to education and training activities and documents that provide technical assistance. To find this page, go to the MDPH home page at: www.mass.gov/dph. On the right side of the page are links; scroll down and click on "Reportable Diseases, Surveillance, and Isolation & Quarantine Requirements." Comments are always welcome; a feedback form is also located on the home page.

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Current and past issues of CD Update are available online at:
http://www.mass.gov/dph/cdc/update/comnews.htm

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